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First record of Giant-Tiger-Shrimp *Penaeus monodon* Fabricius, 1798, in an upper Amazon Estuary

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ABSTRACT: This manuscript record *Penaeus monodon* catch in January 2014 with artisanal trap (*matapi*) in Barreiras creek, Mosqueiro Island, Amazon estuary. This new record is inferred that the species is increasingly inhabiting the waters off the north coast of Brazil, with areas already within the continent.

Keywords: bioinvasion, Penaeidae, matapi, imbalance, crustacean diversity.

Primeiro registro de Camarão-Tigre-Gigante *Penaeus monodon* Fabricius, 1798, no estuário Amazônico superior

RESUMO: O manuscrito registra a captura de *Penaeus monodon* em janeiro de 2014 com armadilha artesanal (*matapi*), no canal de maré Barreiras, Ilha de Mosqueiro, estuário Amazônico. Este manuscrito denota que a espécie está cada vez mais habitando águas ao longo da costa Norte do Brasil, já em áreas dentro do continente.

Palavras-chave: bioinvasão, Penaeidae, *matapi,* desequilíbrio, diversidade de crustáceos.

Exotic species shows an environmental risk, and an important cause of native species extinction (PÉREZ and KLIPPEL, 2006). Introduction of non-native species is closely related to the search for species that show higher yields at the expense of decreased purely extractive fishing pressure. Introduction of *Penaeus monodon* is known Amazonian coastal environments (SILVA et al., 2002; CINTRA et al., 2011, Cintra et al., 2014). However, had not yet been found specimens in freshwater environments, especially in areas with a significant degree of human disturbance such as the Mosqueiro Island (VIANA et al., 2010).

P. monodon tolerates a wide range of salinity, from 0 to 38, and this tolerance makes the species able to survive in different places, making it a potential invasive species (CHAUDHARI and JALIHAL, 1993). According LEÃO et al. (2011) *P. monodon* is an invasive species in the Mediterranean, Western Atlantic, Vietnam, Australia, Thailand, Sri Lanka, Philippines, Mozambique, Bangladesh, Taiwan, Malaysia and Brazil. And in this last, the species was introduced in 1981 (BRIGGS et al., 2005). CINTRA et al. (2014) reported the occurrence of the species in depths from 35.7 to 38.9 m in Brazilian coastal waters, in environments where the invasion was expected given its capture in other areas with similar characteristics in Pará coast. Given the evident adaptive success of this species, this study marks the first occurrence of *P. monodon* in an upper Amazon estuary area, denoting the plasticity of the species and the expectations regarding the adaptation in low resilient environments.

The specimen of *P. monodon* was captured during experimental samples in January 2014 on tidal channel, in Mosqueiro Island (decimal degrees 48,32 W; -1,15 S), Belém, Pará, Brazil (Fig. 1). To carry out the samples was used an local tipical trap for shrimp fishing, popularly known as *matapi*, built from the '*jupati*' palm (*Raphia vinifer*). Samples was carried out by traps baited with *babaçu* meal (*Orbignya speciosa* – commonly used by fishermen in artisanal fisheries) , remained immersed in water for 12 hours, being put on the eve of the new moon, the last low tide of the day, and withdrawing the first low sea the next day.

Specimen was identified with specialized keys (PÉREZ FARFANTE and KENSLEY, 1997; DALL et al., 1990.); checked their morphological development (Motoh 1981, 1985); sex was identified (with copulatory organ in males and absence in females) and weighed (total weight - TW) from a precision balance *Mettler Toledo* (0.001g). With digital caliper precision *Digimess* of 0.01 mm were recorded some standard measures (Square 1).

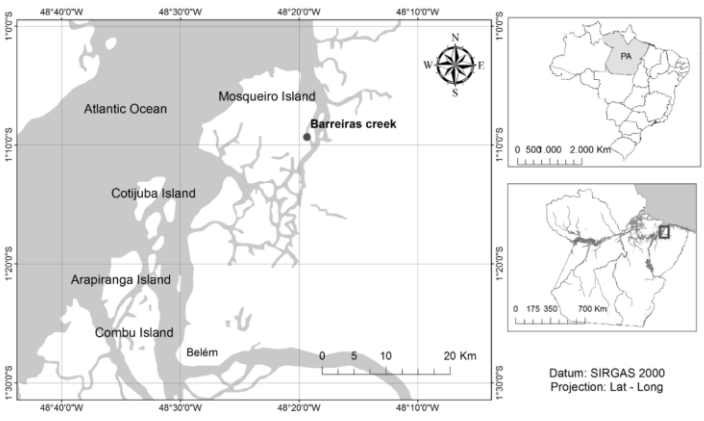

Figure 1. Catch site of *Penaeus monodon*, in tidal channel Barreiras, Mosqueiro Island, Belém- Pará, Brazil in January/2014.

Square 1. Codes of measures records of shrimps captured in Mosqueiro Island, Belém, Pará, Brazil in January, 2014.

Codes	Description of the measures
CT	Distance between anterior portion of the *rostrum* to the end of the telson (in mm)
CCF	Distance between *rostrum* apex to posterior margin of the carapace (in mm)
CC	Distance between the end of the *rostrum* to the end edge of the carapace (in mm)
CR	*Rostrum* apex until the anterior margin of the carapace (in mm)
CA	Measure between posterior margin of the carapace to the anterior margin of the telson (in mm)
CTE	Distance between posterior margin of the abdomen to the posterior margin of the telson (in mm)

Is a female young specime, with this measures recorded: CT = 34.63 mm; CCF – 14.9 mm; CC – 9.08 mm; CR – 8.93 mm; CA – 12.96 mm; CTE – 5.5 mm and WT (Total weight) 0.92g (Fig. 2). Specimen was deposited in CEPNOR (Research and management of fishing resources center) crustacean reference collection.

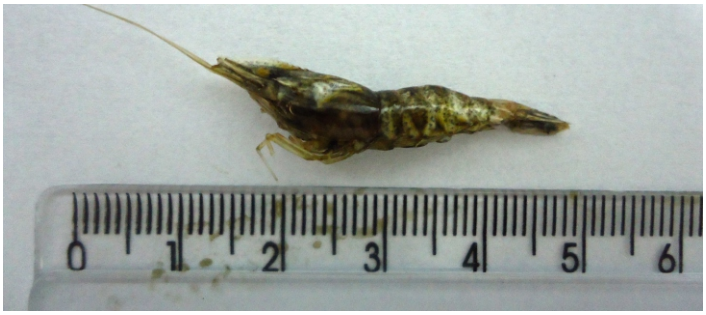

Figure 2. Lateral view of a female specime of *Penaeus monodon,* captured in January of 2014, in Mosqueiro Island, Amazon estuary.

The specimen *rostrum* added eight dorsal teeth and three ventral, exceeding the peduncle of antennula. This antennula has the longest scourge that the peduncle. The basipodite of the first and second periópodo present spines, which are absent in the telson. The specimen shows staining characteristics tracks the species of brown colors, followed by less dense, beige, and these are present from the shell to the individual's abdomen. The same type of staining was also described by COELHO et al. (2001); SILVA et al. (2002) and CINTRA et al. (2011, 2014).

This new record is inferred that the species is increasingly inhabiting the waters off the north coast of Brazil, with areas already within the continent. The introduction of exotic species in the communities in which they did not live, as the report *P. monodon*, can affect both local biodiversity, damaging the ecological balance present in food webs, resulting in the loss of diversity of living things, and are considered as "ecological pollutants", harming local economic activities, such as interfering with fishing activities, when predate, as adults or young, species widely used for fishing in the region, as the genus *Macrobrachium*, and *Farfantepenaeus subtilis* specie, *Xyphopenaeus kroyeri* and *Litopenaeus schmitti*.

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